Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. **(currently amended)** A kit for the detection and measurement of a positively charged transition element in a sample, where the measured transition element is a tag on a biologically active material that binds with at least one of an analyte and analyte complex, comprising:

   (a) at least one tag, wherein the at least one tag comprises at least one isotope of a transition element **and a linker moiety, wherein the tag** ~~**and**~~ is capable of directly tagging a biologically active material;

   (b) instructions; and

   (c) packaging means.

2. **(previously presented)** The kit of claim 1 further comprising a biologically active material, wherein the biologically active material is directly tagged with at least one isotope of a tag comprising a transition element.

3. **(currently amended)** A kit for the detection and measurement of a positively charged transition element in a sample, where the measured transition element is a tag on a competition analyte, comprising:

   (a) a tag comprising at least one isotope of a transition element **and a linker moiety, wherein the tag** ~~**and**~~ is capable of directly tagging a competition analyte;

   (b) instructions; and

   (c) packaging means.

4. **(previously presented)** The kit of claim 3 further comprising a competition analyte, wherein the competition analyte is directly tagged with a tag comprising at least one isotope of a transition element.

5. **(previously presented)** The kit of claim 1 further comprising capture molecules that bind the analyte, analyte complex or competition analyte.

6. **(previously presented)** The kit of claim 1 further comprising solid support means, wherein the solid support means comprises binding sites for one of the analyte and a capture molecule.

7. **(original)** The kit of claims 6 wherein the solid support means is selected from the group consisting of microwell plates and beads.

8. **(original)** The kit of claim 7 wherein the beads are selected from the group consisting of sepharose beads, agarose beads, polystyrene beads and polymeric microspheres.

9. **(original)** The kit of claim 6 wherein the capture molecules are selected from the group consisting of antibodies and aptamers.

10. **(previously presented)** The kit of claim 1 further comprising standards.

11. **(previously presented)** The kit of claim 1 further comprising a dilution buffer.

12. **(previously presented)** The kit of claim 1 further comprising an elution buffer.

13. **(previously presented)** The kit of claim 1 further comprising a wash buffer.

14. **(previously presented)** The kit of claim 1 further comprising an assay buffer.

15-19 **(canceled)**

20. **(previously presented)** The kit of claim 1 wherein the isotope is selected from a group consisting of the noble metals, lanthanides, rare earth elements, gold, silver, platinum, rhodium, iridium and palladium.

21. **(original)** The kit of claim 3 wherein the biologically active material is selected from a group consisting of an antibody, Fab', aptamer, antigen, hormone, growth factor, receptor, protein and nucleic acid.

22. **(previously presented)** The kit of claim 1 wherein the tag includes more than one element.

23. **(previously presented)** The kit of claim 1 wherein the tag includes more than one isotope.

24. **(previously presented)** The kit of claim 1 wherein the tag includes more than one atom of an isotope.

25. **(previously presented)** The kit of claim 23 wherein the tag includes a different number of atoms of each isotope.

26. **(previously presented)** The kit of claim 1 comprising two or more tags for simultaneous determination of two or more analytes.

27. **(previously presented)** The kit of claim 2 comprising two or more tags for simultaneous determination of two or more analytes.

28. **(canceled)**

29. **(currently amended)** A kit for the detection and measurement of an element in a sample, where the measured element is a tag on an analyte in a sample, comprising:

a) a tag comprising at least one isotope of a positively charged transition element **and a linker moiety,** for directly tagging the analyte with a transition element;

b) reagents for tagging the analyte with the tag; and

c) reagents for running a sample containing the tagged analyte on an electrophoresces gel **[[;]]**

d) instructions; and

e) packaging means.

30. **(withdrawn)** A kit for the detection and measurement of an element in a sample, where the measured element is a tag on a biologically active material that binds with at least one of an analyte and analyte complex, comprising:

a) a biologically active material that binds with at least one of the analyte and analyte complex;

b) a tag comprising a transition element; and

c) instructions for i) combining the biologically active material with at least one of the analyte and analyte complex, wherein the biologically active material binds a transition element, ii) introducing the transition element to the sample, and iii) detecting and measuring the element using an atomic mass or optical spectrometer having a source of atoms or atomic ions.

31. **(withdrawn)** A kit for the detection and measurement of an element of an elemental species in a sample where a biologically active material specific to an elemental species binds to the elemental species, comprising:

a) a biologically active material specific to the elemental species; and

b) instructions for i) introducing the biologically active material into the sample, ii) separating the biologically active material bound elemental species complexes from the sample, and iii) detecting and measuring an element of the elemental species contained in the removed complexes using an atomic mass or optical spectrometer having a source of atoms or atomic ions.

32. **(withdrawn)** The kit of claim 31 wherein the biologically active material is tagged with a transition element and the measured element is the element of the tagged antibody.

33. **(withdrawn)** A method for the detection and measurement of a transition element in a sample, where the measured transition element is a tag on an aptamer that binds with an analyte, comprising:

a) combining a tagged aptamer with the analyte, where the tagged aptamer binds with the analyte;

b) separating bound tagged aptamer from unbound tagged aptamer; and

c) detecting and measuring the transition element by an atomic mass or optical spectrometer having a source of ions or atomic ions.

34. **(withdrawn)** A method for the detection and measurement of an element in a sample, where the measured element is a tag on an aptamer that binds with an analyte, comprising:

a) combining the aptamer with the analyte;

b) introducing a transition element to the combined aptamer and analyte, wherein the transition element binds with the aptamer; and

c) detecting and measuring the transition element by an atomic or optical spectrometer having a source of ions or atomic ions.

35. **(withdrawn)** A method for the detection and measurement of an element in a sample, where the measured element is a tag on a competition analyte, comprising:

a) combining a tagged competition analyte with at least one of an analyte and analyte complex, where the tagged competition analyte and at least one of the analyte and anlayte complex are in competition for a binding site;

b) separating bound tagged competition analyte from the unbound tagged competition analyte; and

c) detecting and measuring the transition element on the bound competition analyte by an atomic mass or optical spectrometer having a source of atoms or atomic ions, wherein the detection and measurement of the transition element is related to the detection and measurement of at least one of the analyte and analyte complex.

36. **(withdrawn)** The method of claim 35 wherein the binding site is located on a capture molecule.